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Nota di contenuto	Molecular Basis for Oxidative Stress Induced by Environmental Toxicants in Nematodes -- Molecular Basis for Reduced Lifespan Induced by Environmental Toxicants or Stresses -- Roles of Oxidative Stress Related Molecular Signals in the Regulation of Toxicity of Environmental Toxicants or Stresses -- Functions of MAPK Signalling Pathways in the Regulation of Toxicity of Environmental Toxicants or Stresses -- Functions of Insulin and the Related Signalling Pathways in the Regulation of Toxicity of Environmental Toxicants or Stresses -- Functions of Development Related Signalling Pathways in the Regulation of Toxicity of Environmental Toxicants or Stresses -- Functions of Cell Death and DNA Damage Related Signalling Pathways in the Regulation of Toxicity of Environmental Toxicants or Stresses -- Functions of Metabolism Related Signalling Pathways in the Regulation of Toxicity of Environmental Toxicants or Stresses -- Functions of Protective Response Related Signalling Pathways in the Regulation of Toxicity of Environmental Toxicants or Stresses -- Functions of G-Protein Coupled Receptors and Ion Channels and the Downstream Cytoplasmic Signals in the Regulation of Toxicity of Environmental Toxicants or Stresses -- Discussion on Specificity of Molecular Signals in Response to Certain Environmental Toxicants or Stresses --

Epigenetic Regulation of Toxicity of Environmental Toxicants or Stresses -- Strategies to Screen and to Identify New Genetic Loci Involved in the Regulation of Toxicity of Environmental Toxicants or Stresses -- Molecular Basis for Adaptive Response to Environmental Toxicants or Stresses -- Molecular Basis for Transgenerational Toxicity Induction of Environmental Toxicants or Stresses.

Sommario/riassunto

This book will focus on the molecular basis of oxidative stress induced by toxicants or stresses and various molecular signalling pathways in regulating the toxicity of toxicants or stresses in *Caenorhabditis elegans*. It will also cover the discussion on the aspects of response signals, G-protein coupled receptors and ion channels, specific molecular signals, and epigenetic signals involved in the regulation of toxicity from toxicants or stresses. The molecular basis for adaptive response for transgenerational toxicity of environmental toxicants or stresses will be further discussed. Nematode *Caenorhabditis elegans* is a classic model animal with well-described genetic and developmental backgrounds based on the study of life science, and has been further successfully and widely used in both toxicity assessment and toxicological study of various environmental toxicants or stresses. Based on related available data, this book aims at providing a systematic understanding of the knowledge system of molecular toxicology in *C. elegans*.
